

Please Amend the Claims as Follows:

1. (Currently Amended) A method for reducing the volume or rate of ~~an encoded digital video a bitstream that comprises both independently representative of an encoded digital video signal, the encoded digital video signal comprising a number of encoded pictures and pictures encoded using prediction from other pictures, the method comprising:~~ characterized in that the method comprises the steps of

~~-using a bitstream analyzer to separate different types of data in the encoded digital video bitstream into component bitstreams,~~

~~-partly decoding (704) independently encoded pictures and pictures encoded using prediction from other pictures from the encoded digital video bitstream, thus producing partly decoded data from independently encoded pictures and partly decoded data from pictures encoded using prediction from other pictures,~~

~~-reducing (705) the amount of bits in the partly decoded data from independently encoded pictures and partly decoded data from pictures encoded using prediction from other pictures and~~

~~-re-encoding (706) the partly decoded data from independently encoded pictures and partly decoded data from pictures encoded using prediction from other pictures in which the amount of bits is reduced, thus producing a re-encoded digital video bitstream, the volume or rate of which is smaller than that of the encoded digital video bitstream, that fulfils the certain set of predefined structural rules,~~

~~wherein the step of using the bitstream analyzer to separate different types of data comprises separating virtual buffer verifier values from the encoded digital video bitstream~~

~~- representing an image block from the bitstream by DCT coefficients; and~~

~~- filtering the DCT coefficients using a filter having a transfer function that is adaptable to provide a desired reduction in the volume or rate of the bitstream.~~

2. (Currently Amended) A method according to claim 1, ~~characterized in that the step of partly wherein~~ decoding the encoded digital video bitstream DCT coefficients from the bitstream comprises the substeps of
- ~~-separating (502) a number of variable length encoded, weighted and quantized DCT coefficient matrices from an MPEG-2 encoded digital video bitstream and~~
 - ~~-decoding (505) the variable length coding of said variable length encoded, weighted and quantized DCT coefficient matrices, thus producing a number of weighted and quantized DCT coefficient matrices~~ a variable length decoding operation.
3. (Currently Amended) A method according to claim ~~[[2]] 1,~~ characterized in that ~~the step of reducing the amount of bits in the partly decoded data from independently encoded pictures and partly decoded data from pictures encoded using prediction from other pictures comprises the substep of reducing (506, 507) the number of bits used to represent said weighted and quantized DCT coefficient matrices~~ wherein filtering the DCT coefficients reduces the number of bits required for their representation in the bitstream.
4. (Currently Amended) A method according to claim ~~[[3]] 1,~~ characterized in that ~~the substep of reducing the number of bits used to represent said weighted and quantized DCT coefficient matrices further comprises the substep of low pass filtering (507) a weighted and quantized DCT coefficient matrix with a filter having a certain wherein the transfer function of said filter is a low-pass transfer function.~~
5. (Currently Amended) A method according to claim ~~[[4]] 1,~~ characterized in that ~~the substep of low pass filtering said weighted and quantized DCT coefficient matrices further comprises the substep of adapting said transfer function according to the contents of a DCT coefficient matrix wherein the DCT coefficients are arranged in DCT coefficient matrices and the transfer function of said filter is adapted according to the contents of a DCT coefficient matrix.~~

6. (Currently amended) A method according to claim ~~[[3]] 5~~, ~~characterized in that the substep of reducing the number of bits used to represent said weighted and quantized DCT coefficient matrices further comprises the steps of comprising:~~

- defining a number of coefficient groups within a DCT coefficient matrix and
- low-pass filtering ~~each of said a~~ coefficient groups with group using a filter having a ~~certain~~ transfer function associated with the coefficient group in question.

7. (Currently Amended) A method according to claim 6, ~~characterized in that the substep of low-pass filtering each of said coefficient groups further comprises the substep of comprising~~ adapting ~~[[said]] the~~ transfer function of a filter applied to a coefficient group according to the contents of the coefficient group in question.

8. (Currently Amended) A method according to claim 7, ~~characterized in that the substep of wherein~~ adapting ~~[[said]] the~~ transfer function of a filter applied to a coefficient group according to the contents of the coefficient group in question further comprises the substeps of:

- finding ~~[[the]] a~~ coefficient that represents the highest signal energy within the coefficient group~~[[,]]~~;
- defining a ~~certain~~ first variable value by referring to the location of ~~[[said]] the~~ coefficient that represents the highest signal energy within the coefficient group; and
- scaling ~~[[said]] the~~ transfer function ~~[[with]] of the filter associated with the coefficient group according to~~ with said first variable value, thus producing a modified transfer function which has a ~~pass-band~~ pass-band the width of which is greater the further said coefficient that represents the highest signal is in the DCT coefficient matrix from the DC coefficient of that DCT coefficient matrix.

9. (Currently Amended) A method according to claim ~~[[3]] 1~~, ~~characterized in that the substep of reducing the number of bits used to represent said weighted and quantized DCT coefficient matrices further comprises the substep of requantizing (506) a weighted and quantized DCT coefficient matrix by dividing all coefficients contained~~

therein by a certain second variable value further comprising applying a re-quantization operation to the decoded DCT coefficients.

10. Cancelled

11. (Currently Amended) A method according to claim [[3]], ~~characterized in that the step of re-encoding the partly decoded digital video bitstream comprises the substep of variable length coding (508) the DCT coefficient matrices after reducing the number of bits used to represent said DCT coefficient matrices~~ further comprising re-encoding the DCT coefficients after applying said filtering and forming a reconstructed bitstream.

12. (Currently Amended) A method according to claim [[2]] ~~11, characterized in that in order to complement the step of reducing the amount of bits in the partly decoded digital video bitstream it comprises the substeps of~~

~~-separating (502) a number of virtual buffer verifier values from said MPEG 2 encoded digital video bitstream and~~

~~-modifying (510) said virtual buffer verifier values, thus producing modified virtual buffer verifier values that are in accordance with the re-encoded digital video bitstream the volume or rate of which is smaller than that of the encoded digital video bitstream~~ further comprising modifying values associated with a virtual buffer verifier, provided to control the rate of the bitstream, in accordance with the reconstructed bitstream.

13. (Currently Amended) An arrangement for reducing the volume or rate of an encoded digital video bitstream that comprises both independently encoded pictures and pictures encoded using prediction from other pictures, ~~characterized in that the arrangement comprises:~~

~~-a bitstream analyzer arranged to separate different types of data in the encoded digital video bitstream into component bitstreams,~~

~~-means for partly decoding (502, 505) independently encoded pictures and pictures encoded using prediction from other pictures from the encoded digital video bitstream,~~

~~-means for reducing (506, 507) the amount of bits in partly decoded data from independently encoded pictures and partly decoded data from pictures encoded using prediction from other pictures and~~

~~-means for re-encoding (508) the partly decoded data from independently encoded pictures and partly decoded data from pictures encoded using prediction from other pictures in which the amount of bits is reduced,~~

~~wherein the bitstream analyzer is arranged to separate virtual buffer verifier values of the encoded digital video bitstream a bitstream representative of an encoded digital video signal, the encoded digital video signal comprising a number of encoded pictures, the arrangement comprising:~~

~~a decoder for decoding DCT coefficients representative of an image block from the bitstream; and~~

~~a filter for filtering the DCT coefficients, said filter having a transfer function that can be adapted to provide a desired reduction in the volume or rate of the bitstream.~~

14. (Currently Amended) An arrangement according to claim 13, ~~characterized in that it comprises~~

~~-a bitstream analyzer (502) arranged to separate a number of variable length encoded, weighted and quantized DCT coefficient matrices from an MPEG-2 encoded digital video bitstream,~~

~~-a variable length decoder (505) for decoding the variable length coding of said variable length encoded, weighted and quantized DCT coefficient matrices and~~

~~-means for reducing (506, 507) the number of bits used to represent said weighted and quantized DCT coefficient matrices wherein the decoder is arranged to perform a variable length decoding operation.~~

15. (Currently Amended) An arrangement according to claim [[14]] 13, ~~characterized in that said means for reducing the number of bits used to represent said weighted and quantized DCT coefficient matrices comprise a filtering block (507) for filtering the coefficients contained in DCT coefficient matrices~~ wherein the filter is arranged to reduce the number of bits required to represent the DCT coefficients.

16. (Currently Amended) An arrangement according to claim [[15]] 13, ~~characterized in that said filtering block (507) is a low pass filter with a certain transfer function~~ wherein the filter has a low-pass transfer function.

17. (Currently Amended) An arrangement according to claim 16, ~~characterized in that said low pass filter (507) has a transfer function which is dependent on the contents of the DCT coefficient matrix which is filtered~~ wherein the DCT coefficients are arranged in DCT coefficient matrices and the transfer function of the filter is arranged to be adapted in dependence upon the contents of a DCT coefficient matrix.

18. (Currently Amended) An arrangement according to claim [[15]] 17, ~~characterized in that said filtering block (507) is arranged to implement a multitude of~~ wherein the filter is arranged to apply different filtering functions upon different coefficient groups within a single DCT coefficient matrix.

19. (Currently Amended) An arrangement according to claim 18, ~~characterized in that said filtering block (507) is arranged to implement a multitude of different filtering functions upon different coefficient groups within a single DCT coefficient matrix, wherein each filtering function is dependent on the contents of the coefficient group which is filtered~~ wherein the transfer function of the filter is arranged to be adapted in dependence on the contents of a coefficient group.

20. (Currently Amended) An arrangement according to claim [[14]], ~~characterized in that said means for reducing the number of bits used to represent said weighted and~~

~~quantized DCT coefficient matrices comprise a requantization block (506) arranged to divide a DCT coefficient matrix by a certain second variable value~~ further comprising a quantizer for applying a requantization operation to the decoded DCT coefficients.

21. (Original) An arrangement according to claim [[14]] 13, ~~characterized in that it comprises~~ comprising:

- an input [[(501)]] and an output [[(504),]];
- a bitstream analyzer [[(502)]] coupled to said input [[(501)]], ~~[[said]] the~~ bitstream analyzer having first, second, third and fourth data outputs and a control output[[,]];
- a multiplexer [[(503)]] coupled to said output [[(504)]],~~[[said]] the~~ multiplexer having first, second, third and fourth data inputs and a control input[[,]];
- an essentially direct connection from the control output of ~~[[said]] the~~ bitstream analyzer [[(502)]] to the control input of ~~[[said]] the~~ multiplexer [[(503),]];
- an essentially direct connection from the first data output of ~~[[said]] the~~ bitstream analyzer [[(502)]] to the first data input of ~~[[said]] the~~ multiplexer [[(503),]];
- between the second data output of ~~[[said]] bitstream analyzer~~ [[(502)]] and the second data input of ~~[[said]] the~~ multiplexer [[(503)]] a series connection ~~[[where]] comprising a variable length decoder (505) is coupled to the second data output of~~ ~~[[said]] the~~ bitstream analyzer [[(502)]], a variable length re-encoder ~~(508) is coupled to the second data input of~~ ~~[[said]] the~~ multiplexer [[(503)]], and, between ~~[[said]] the~~ variable length decoder [[(505)]] and ~~[[said]] the~~ variable length re-encoder, ~~(508) there are a requantizing block~~ [[(506)]] and a DCT filtering block [[(507)]] in any order, of which said variable length decoder [[(505)]], said variable length re-encoder [[(508)]] and said requantizing block (506) each ~~comprise~~ comprising a control output[[,]];
- between the third data output of ~~[[said]] bitstream analyzer~~ [[(502)]] and the third data input of~~[[said]] the~~ multiplexer [[(503)]], an element-wise matrix multiplier block [[(509)]] having a control input which is coupled to the control output of ~~[[said]] the~~ requantizing block [[(506),]]; and

-between the fourth data output of [[said]] the bitstream analyzer [(502)] and the fourth data input of [[said]] the multiplexer [(503)], a virtual buffer verifier value modifier block [(510)] having first and second control inputs of which the first control input is coupled to the control output of [[said]] the variable length decoder [(505)] and the second control input is coupled to the control output of [[said]] the variable length re-encoder [(508)].

22. Cancelled

23. Cancelled

24. (New) An arrangement according to claim 13, further comprising means for re-encoding the DCT coefficients after applying said filtering and means for forming a reconstructed bitstream.

25. (New) An arrangement according to claim 24, further comprising means for modifying values associated with a virtual buffer verifier, provided to control the rate of the bitstream, in accordance with the reconstructed bitstream.

26. (New) A network element comprising an arrangement for reducing the volume or rate of a bitstream representative of an encoded digital video signal, the encoded digital video signal comprising a number of encoded pictures, the arrangement comprising:

a decoder for decoding DCT coefficients representative of an image block from the bitstream; and

a filter for filtering the DCT coefficients, said filter having a transfer function that can be adapted to provide a desired reduction in the volume or rate of the bitstream.

27. (New) A cellular radio network comprising an arrangement for reducing the volume or rate of a bitstream representative of an encoded digital video signal, the encoded digital video signal comprising a number of encoded pictures, the arrangement comprising:

a decoder for decoding DCT coefficients representative of an image block from the bitstream; and

a filter for filtering the DCT coefficients, said filter having a transfer function that can be adapted to provide a desired reduction in the volume or rate of the bitstream.

28. (New) An arrangement according to claim 19, arranged to:

find a coefficient that represents the highest signal energy within a coefficient group;

define a first variable value by referring to the location of the coefficient that represents the highest signal energy within the coefficient group; and

scale the transfer function of the filter according to said first variable value, thus producing a modified transfer function which has a pass-band the width of which is greater the further said coefficient that represents the highest signal is in the DCT coefficient matrix from the DCT coefficient of that DCT coefficient matrix.